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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,751	09/25/2003	Miguel Dajer	IDS 125676 67,108-018	2766
26096	7590	07/01/2005	EXAMINER	
CARLSON, GASKEY & OLDS, P.C. 400 WEST MAPLE ROAD SUITE 350 BIRMINGHAM, MI 48009			STEIN, JAMES D	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 07/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/670,751	DAJER ET AL.	
	<b>Examiner</b> James D. Stein	<b>Art Unit</b> 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 29 April 2005.

2a)  This action is FINAL.                            2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-20 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1-3,5-8,10-15 and 17-20 is/are rejected.

7)  Claim(s) 4,9 and 16 is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on 9/25/03 is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
    Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
    Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_.  
\_\_\_\_\_

## DETAILED ACTION

This Office Action is responsive to the amendment filed on 4/29/05. New claims 12 and 20 have been added, leaving claims 1-20 pending. Applicant's arguments with respect to the rejections of claims 1-18 have been fully considered and are persuasive. Therefore, the rejections set forth in the previous Office Action mailed 1/25/05 has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in the Action that follows.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-8, 10-15 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over [USPAT 4,943,136] to Popoff, and further in view of [USPUB 2002/0141020] to Doucet et al., which which disclose related wireless optical backplane interconnection devices.

With regard to claim 1, fig. 1 of Popoff shows at least one transceiver 18 at a location remote from a backplane; and at least one communication link 12 coupling said at least one transceiver 24 to the backplane, wherein the communication link 12 carries signals between the backplane and said at least one transceiver 18 at the location remote from the backplane. Therefore, Popoff discloses the claimed invention except for the transceiver 18 to be a radio. Apart from radio being an extremely well known transceiver in the art, Doucet et al. disclose a related wireless optical backplane configuration (Fig. 4) used to transmit and receive radio frequency signals [0008, 0046, 0132 and 0134], which advantageously facilitates high speed, bi-

directional, broadband, wide area telecommunications to a greater number of subscribers [0008] while simultaneously avoiding the costs associated with licensing and purchasing bands in the radio spectrum [0046]. Therefore, it would have been obvious at the time of the invention to one of ordinary skill in the art to modify the device disclosed by Popoff to include radio transceivers, specifically, in order to facilitate high speed, bi-directional, broadband, wide area telecommunications to a greater number of subscribers, while simultaneously avoiding the costs associated with licensing and purchasing bands in the radio spectrum.

With regard to claim 2, in addition to the rejection of claim 1 previously discussed above, said communication link 12 is taught by Popoff to be a fiber-optic cable (col. 1 line 21).

With regard to claim 3, in addition to the rejection of claim 1 previously discussed above, said backplane is shown by figs. 2 and 3 to further comprise a plurality of backplane cards 26 attached thereto.

With regard to claim 5, in addition to the rejection of claim 1 previously discussed above, fig. 1 shows a plurality of radio cards 10 respectively connected to the radio transceivers 18.

With regard to claim 6, in addition to the rejection of claim 5 previously discussed above, figs. 2 and 3 shows the plurality of backplane cards 26 respectively connected to the backplane and the plurality of communication links 12 respectively connected to the backplane cards 26. Fig. 1 shows the plurality of communication links 12 respectively connected to the radio cards 10 via connectors 13 (col. 4 lines 20-26).

With regard to claim 7, in addition to the rejection of claim 6 previously discussed above, Popoff disclose a plurality of radio cards 10. Furthermore, fig. 2 shows an embodiment wherein each backplane card 26 is connected to the plurality of radio cards 10 via communication link 12.

This is due to the parallel nature of the connection between the radio cards and backplane cards (as opposed to the serially connected embodiment of Fig. 3 wherein each backplane card is connected to a single radio card).

With regard to claim 8, in addition to the rejection of claim 6 previously discussed above, figs. 1-3 show the device comprises a plurality of radio cards 10 connected to a plurality of backplane cards 26 via a plurality of communication links 12, the backplane cards 26 being attached to the backplane.

With regard to claim 10, figs. 2 and 3 show a backplane fiber card 26 having a backplane connector 40; fig. 1 shows a radio fiber card 10 having a radio connector 13; and at least one fiber link 12 connecting the backplane fiber card 26 and the radio fiber card 10.

With regard to claim 11, in addition to the rejection of claim 10 previously discussed above, Popoff in view of Doucet et al. disclose the claimed invention except for the backplane connector and the radio connector to have a standard configuration for connection to a backplane and a radio, respectively. It would have been obvious at the time of the invention to one of ordinary skill in the art to ensure the radio connector and the backplane connector each had a standard configuration for connection to a backplane and a radio, respectively, in order to facilitate interconnection of the radio and backplane.

With regard to claim 12, in addition to the rejection of claim 10 previously discussed above, the radio fiber card 10 and the backplane fiber card 26 each comprise an optical transceiver 18 connected to at least one fiber link 12 (col. 4 lines 23-26).

With regard to claim 13, in addition to the rejection of claim 10 previously discussed above, figs. 2 and 3 show the backplane fiber card comprises a plurality of fiber links 32. Fig. 1 shows each fiber link (collectively 12) is connected to a radio card 10 via connector 13.

With regard to claims 14, 15 and 17-20, the method of transmitting a signal between a backplane and a remote radio is inherent to the disclosure discussed above in the rejections of claims 1-3 and 5-8.

#### *Allowable Subject Matter*

Claims 4, 9 and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. None of the cited prior art discloses or suggests the wireless communication backplane system as discussed above wherein the backplane card is coupled with a radio card slot in the backplane; the system comprising at least one non-remote radio, wherein said at least one non-remote radio is plugged into a first radio card slot in the backplane and said at least one backplane fiber card plugged into a second radio card slot in the backplane and connected to said at least one radio card via said at least one communication link.

#### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: [USPAT 6,615,315] to Mulvey et al., which discloses a related optical backplane apparatus with a similar remote configuration.

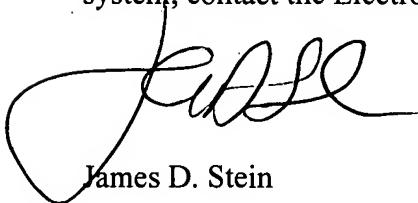
This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

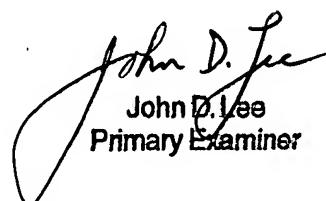
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James D. Stein whose telephone number is (571) 272-2132. The examiner can normally be reached on M-F (8:00am-4:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



James D. Stein



John D. Lee  
Primary Examiner